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Notice of Allowability	Application No.	Applicant(s)	
	10/676,726	THORNTON ET AL.	
	Examiner	Art Unit	
	Burton S. Mullins	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to affidavit filed June 3, 2005 and after final filed June 10, 2005.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☒ The drawings filed on ²³~~16~~ February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on 20 June 2005, Mr. David Powsner requested an extension of time for 1 MONTH(S) and authorized the Director to charge Deposit Account No. 141449 the required fee of \$60 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In claim 1, line 4, delete "at least one of" and insert --one or more-- after "which". On line 6, after "attraction forces" insert --across a substantially planar gap--. On line 8, after "restoring forces" insert --across said same substantially planar gap--. On lines 8-10, delete "on the vehicle in response...linear synchronous motor". On line 12, insert --across said same substantially planar gap-- and delete "on the vehicle". On lines 13-14 delete "of said linear synchronous motor".

In claim 4, line 4, delete "at least one of" and insert --one or more-- after "which". On line 6, after "attraction forces" insert --across a substantially planar gap--. On line 8, after "restoring forces" insert --across said same substantially planar gap--. On lines 8-10, delete "on the vehicle in response...linear synchronous motor". On line 12, insert --across said same substantially planar gap-- and delete "on the vehicle". On lines 13-14 delete "of said linear synchronous motor".

Art Unit: 2834

In claim 9, line 4, delete “at least one of” and insert —one or more— after “which”. On line 6, after “attraction forces” insert —across a substantially planar gap—. On line 8, after “restoring forces” insert --across said same substantially planar gap—. On lines 8-10, delete “on the vehicle in response...linear synchronous motor”. On line 12, insert --across said same substantially planar gap-- and delete “on the vehicle”. On lines 13-14 delete “of said linear synchronous motor”.

In claim 11, line 4, delete “at least one of” and insert —one or more— after “which”. On line 6, after “attraction forces” insert —across a substantially planar gap—. On line 8, after “restoring forces” insert --across said same substantially planar gap—. On lines 8-10, delete “on the vehicle in response...linear synchronous motor”. On line 12, insert --across said same substantially planar gap-- and delete “on the vehicle”. On lines 13-14 delete “of said linear synchronous motor”.

In claim 13, line 4, delete “at least one of” and insert —one or more— after “which”. On line 6, after “attraction forces” insert —across a substantially planar gap—. On line 8, after “restoring forces” insert --across said same substantially planar gap—. On lines 8-10, delete “on the vehicle in response...linear synchronous motor”. On line 12, insert --across said same substantially planar gap-- and delete “on the vehicle”. On lines 13-14 delete “of said linear synchronous motor”.

In claim 14, line 4, delete “at least one of” and insert —one or more— after “which”. On line 6, after “attraction forces” insert —across a substantially planar gap—. On line 8, after “restoring forces” insert --across said same substantially planar gap—. On lines 8-10, delete “on the vehicle in response...linear synchronous motor”. On line 12, insert --across said same

Art Unit: 2834

substantially planar gap-- and delete "on the vehicle". On lines 13-14 delete "of said linear synchronous motor".

In claim 15, line 4, delete "at least one of" and insert --one or more-- after "which". On line 6, after "attraction forces" insert --across a substantially planar gap--. On line 8, after "restoring forces" insert --across said same substantially planar gap--. On lines 8-10, delete "on the vehicle in response...linear synchronous motor". On line 12, insert --across said same substantially planar gap-- and delete "on the vehicle". On lines 13-14 delete "of said linear synchronous motor".

In claim 16, line 4, delete "at least one of" and insert --one or more-- after "which". On line 6, after "attraction forces" insert --across a substantially planar gap--. On line 8, after "restoring forces" insert --across said same substantially planar gap--. On lines 8-10, delete "on the vehicle in response...linear synchronous motor". On line 12, insert --across said same substantially planar gap-- and delete "on the vehicle". On lines 13-14 delete "of said linear synchronous motor".

In claim 17, line 4, delete "at least one of" and insert --one or more-- after "which". On line 6, after "attraction forces" insert --across a substantially planar gap--. On line 8, after "restoring forces" insert --across said same substantially planar gap--. On lines 8-10, delete "on the vehicle in response...linear synchronous motor". On line 12, insert --across said same substantially planar gap-- and delete "on the vehicle". On lines 13-14 delete "of said linear synchronous motor".

In claim 18, line 4, delete "at least one of" and insert --one or more-- after "which". On line 6, after "attraction forces" insert --across a substantially planar gap--. On line 8, after

Art Unit: 2834

“restoring forces” insert --across said same substantially planar gap--. On lines 8-10, delete “on the vehicle in response...linear synchronous motor”. On line 12, insert --across said same substantially planar gap-- and delete “on the vehicle”. On lines 13-14 delete “of said linear synchronous motor”.

2. The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

Enter Replacement Sheets for Figs.4, 7 and 8.

Response to Amendment

3. The affidavit under 37 CFR 1.132 filed June 3, 2005 has been considered. While not sufficient to overcome the rejection of claims 1-3, 5-8 and 10-16 based upon Raschbichler (US 5,370,059), the affidavit, in particular paragraphs 13-14, establishes that Raschbichler discloses a portion of the “Transrapid” train system. When the magnetic levitation of the “Transrapid” system is viewed as a whole, it is apparent that applicant’s structure is different. As seen in the third depiction, in the “Transrapid” system, the magnetic attraction and longitudinal forces act across a first air gap while the lateral forces act across a second air gap perpendicular to the first. In particular, comparison was made between applicant’s Fig.1 and Depiction 3 of the affidavit from C.Sunde’s “Construction of a Magnetic Levitating Train with the high-temperature superconductor Y-Ba-Cu-O”, p.26. In subsequent telephone interviews, applicant and the examiner agreed to add the limitation directed towards a “substantially planar air gap” to distinguish over Raschbichler’s “Transrapid” structure with two perpendicular air gaps.

Reasons for Allowance

4. The following is an examiner's statement of reasons for allowance: The prior art, in particular the "Transrapid" system disclosed in Raschbichler (US '059) does not teach a substantially planar air gap across which the magnetic attraction, lateral restoring and longitudinal forces act. While Fig.1 of Raschbichler shows a planar air gap 9, it is apparent from applicant's June 3, 2005 affidavit that the Raschbichler reference is part of a larger system known as "Transrapid" in which separate structures are used to achieve magnetic attraction and longitudinal forces, on the one hand, and lateral restoring forces, on the other hand. See paragraphs 13-14 of the affidavit and the three depictions presented. In particular, the third depiction from C.Sunde's "Construction of a Magnetic Levitating Train with the high-temperature superconductor Y-Ba-Cu-O", p.26, shows a stator/levitation magnet structure and a separate guidance magnet/guidance rail structure. The air gaps of the respective structures are perpendicular to one another and do not form a single substantially planar air gap across which all three of magnetic attraction, lateral restoring and longitudinal forces act.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Drawings

5. The drawings filed on 6 June 2004 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftsperson's Patent Drawing Review," PTO-

Art Unit: 2834

948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



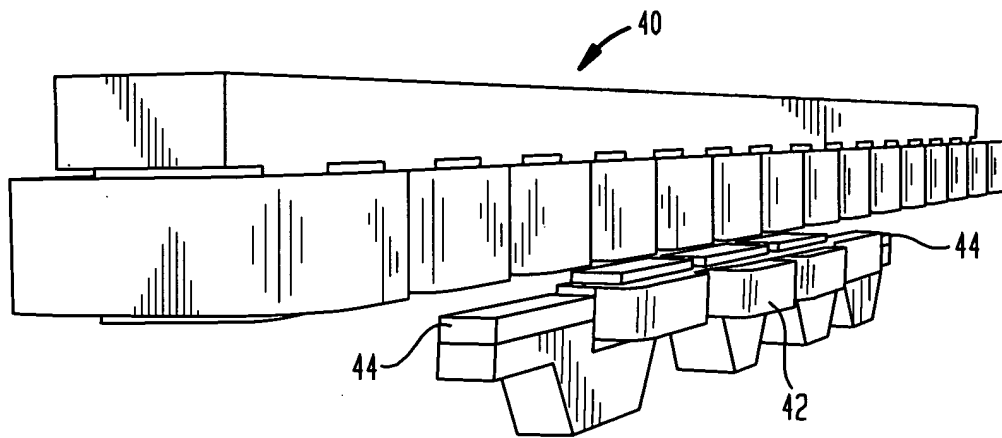
Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm

20 June 2005

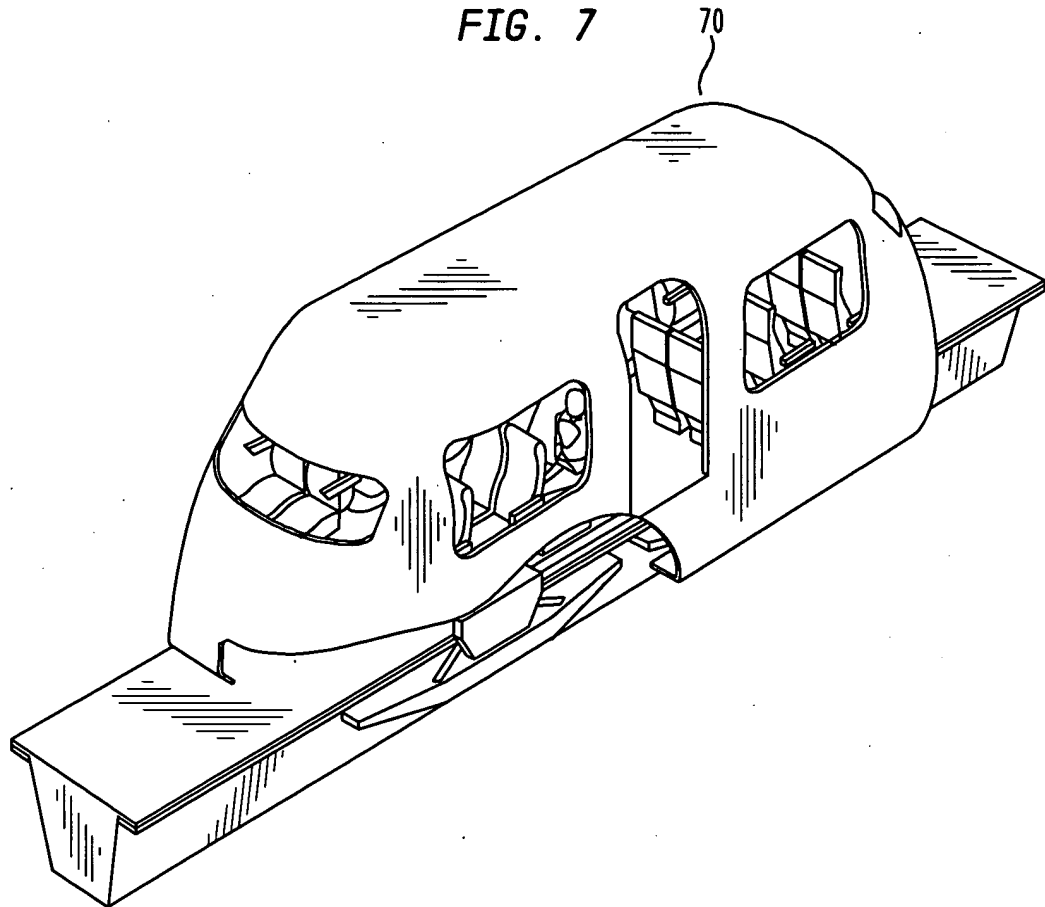
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FIG. 4



Ex Amult
Replacement 2
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FIG. 7



Ex. Invt
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FIG. 8

